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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,090

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Gisbert Staupendahl

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12/05/2006

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EXAMINER

HEINRICH, SAMUEL M

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/500,090

Applicant(s)

STAUPENDAHL ET AL.

Examiner

Samuel M. Heinrich

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 4-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, part (e), "between each back and forth movement of the beam to cool the working zone" is not a clear description of whether the work is cooled between the back movement and the forth movement or between sequential back and forth movements.

Claims 4-15 depend from claim 1 and contain this unclear description.

Claim 10, line 3, "on the order of W", and line 5, "≤ a plurality of kHz" not clear.

Claim 14, "Rayleigh length" is not defined.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4, 6, 8, and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,710,605 to Presby in view of USPN 5,368,900 to Jelley et al and in view of USPN 5,233,327 to Bartush et al. Presby describes and shows (Front Page) CO2 laser nibbling of a optic fiber. Jelley et al describe (Abstract) sequentially irradiating layers in an ablation process and show (Figures 1B, 2B, and 3) the stepped layer removal. Bartush et al describe (column 5, lines 49-58) time for "cooling between passes" in order to control heat transfer to the work piece and prevent undesired annealing. The use of the instant claimed pulse power, back and forth movement, cooling, and repeating would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the control provides uniform material removal while minimizing damage to the work piece. Different shape and thickness work pieces would have been obvious depending on the particular fibers obtained from a supplier. Cooling time would have been obvious depending on the particular work piece and tooling. Right angle and inclined cut surfaces are both known cutting orientations. Size of the beam with respect to the focus spot would have been obvious depending on the tooling used to deliver the beam.

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Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,710,605 to Presby in view of USPN 5,368,900 to Jelley et al and in view of USPN 5,233,327 to Bartush et al as applied to claim 1 above, and further in view of USPN 6,246,026 to Vergeest. Vergeest describes cutting at least one fiber and the instant claimed nibbling or controlled ablation would have been obvious with plural fibers.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,710,605 to Presby in view of USPN 5,368,900 to Jelley et al and in view of USPN 5,233,327 to Bartush et al as applied to claim 1 above, and further in view of FR2688726A1. Basic Abstract describes laser cutting with blowing gas which removes fume and particles and the use of blowing gas would have been an obvious consideration with the nibbling process because it provides clear laser delivery and clean work.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,710,605 to Presby in view of USPN 5,368,900 to Jelley et al in view of USPN 5,233,327 to Bartush et al and in view of FR2688726A1 as applied to claim 7 above, and further in view of JP405228665A. Blowing purified gas at a work piece is described by JP405228665A and the use thereof would have been obvious because it provides a controlled work spot.

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel M. Heinrich whose telephone number is 571-272-1175. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, P. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Samuel M Heinrich  
Primary Examiner  
Art Unit 1725

SMH